

Environmental Protection Agency

§ 1065.345

as x_{THCinit} and use it to correct for HC contamination as described in § 1065.660.

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(g) You may repeat the propane check to verify a batch sampler, such as a PM secondary dilution system.

§ 1065.342 Sample dryer verification.

(a) *Scope and frequency.* If you use a sample dryer as allowed in § 1065.145(d)(2) to remove water from the sample gas, verify the performance upon installation, after major maintenance, for thermal chiller. For osmotic membrane dryers, verify the performance upon installation, after major maintenance, and within 35 days of testing.

(b) *Measurement principles.* Water can inhibit an analyzer's ability to properly measure the exhaust component of interest and thus is sometimes removed before the sample gas reaches the analyzer. For example water can negatively interfere with a CLD's NO_x response through collisional quenching and can positively interfere with an NDIR analyzer by causing a response similar to CO.

(c) *System requirements.* The sample dryer must meet the specifications as determined in § 1065.145(d)(2) for dewpoint, T_{dew} , and absolute pressure, p_{total} , downstream of the osmotic-membrane dryer or thermal chiller.

(d) *Sample dryer verification procedure.* Use the following method to determine sample dryer performance, or use good engineering judgment to develop a different protocol:

(1) Use PTFE or stainless steel tubing to make necessary connections.

(2) Humidify N_2 or purified air by bubbling it through distilled water in a sealed vessel that humidifies the gas to the highest sample dewpoint that you estimate during emission sampling.

(3) Introduce the humidified gas upstream of the sample dryer.

(4) Downstream of the vessel, maintain the humidified gas temperature at least 5 °C above its dewpoint.

(5) Measure the humidified gas dewpoint, T_{dew} , and pressure, p_{total} , as close as possible to the inlet of the sample dryer to verify the dewpoint is the highest that you estimated during emission sampling.

(6) Measure the humidified gas dewpoint, T_{dew} , and pressure, p_{total} , as close as possible to the outlet of the sample dryer.

(7) The sample dryer meets the verification if the results of paragraph (d)(6) of this section are less than the dew point corresponding to the sample dryer specifications as determined in § 1065.145(d)(2) plus 2 °C or if the mole fraction from (d)(6) is less than the corresponding sample dryer specifications plus 0.002 mol/mol.

(e) *Alternate sample dryer verification procedure.* The following method may be used in place of the sample dryer verification procedure in (d) of this section. If you use a humidity sensor for continuous monitoring of dewpoint at the sample dryer outlet you may skip the performance check in § 1065.342(d), but you must make sure that the dryer outlet humidity is below the minimum values used for quench, interference, and compensation checks.

[73 FR 37307, June 30, 2008]

EFFECTIVE DATE NOTE: At 73 FR 37307, June 30, 2008, a new § 1065.342 was added, effective July 7, 2008.

§ 1065.345 Vacuum-side leak verification.

(a) *Scope and frequency.* Upon initial sampling system installation, after major maintenance, and before each test according to subpart F of this part for laboratory tests and according to subpart J of this part for field tests, verify that there are no significant vacuum-side leaks using one of the leak tests described in this section.

(b) *Measurement principles.* A leak may be detected either by measuring a small amount of flow when there should be zero flow, or by detecting the dilution of a known concentration of span gas when it flows through the vacuum side of a sampling system.

(c) *Low-flow leak test.* Test a sampling system for low-flow leaks as follows:

(1) Seal the probe end of the system by taking one of the following steps:

(i) Cap or plug the end of the sample probe.

(ii) Disconnect the transfer line at the probe and cap or plug the transfer line.

(iii) Close a leak-tight valve in-line between a probe and transfer line.